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INFORMATION DISCLOSURE STATEMENT BY APPLICANT				Application Number 10/719,990	
<i>(Use as many sheets as necessary)</i>				Filing Date November 21, 2003	
				First Named Inventor Alan Howe	
				Art Unit 1642	
				Examiner Name Brandon J. Fetterolf	
Sheet	1	of	10	Attorney Docket Number 421/73/2	

U.S. PATENT DOCUMENTS

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	6	Ahn, N.G., and Resing, K.A., "Toward the phosphoproteome," Nature Biotechnology. Vol. 19 pgs. 317-318 (2001).		
	7	Andersson, "Recognition of phosphate groups by immobilized aluminum(III) ions," Journal of Chromatography. Vol. 539 pgs. 327-334 (1991).		
	8	Andersson, L., and Porath, J., "Isolation of Phosphoproteins by Immobilized Metal (Fe ³⁺) Affinity Chromatography," Analytical Biochemistry. Vol. 154 pgs. 250-254 (1986).		
	9	Belew, M., and Porath, J., "Immobilized metal ion affinity chromatography. Effect of solute structure, ligand density and salt concentration on the retention of peptides," Journal of Chromatography. Vol. 516 pgs. 333-354 (1990).		
	10	Blume-Jensen, P., and Hunter, T., "Oncogenic kinase signaling," Nature. Vol. 411 pgs. 355-365 (2001).		
	11	Bustos et al., "Woodward's Reagent K Reacts with Histidine and Cysteine Residues in <i>Escherichia coli</i> and <i>Saccharomyces cerevisiae</i> Phosphoenolpyruvate Carboxykinases," Journal of Protein Chemistry. Vol. 15, No. 5 pgs. 467-472 (1996).		
	12	Cohen, "Protein kinases — the major drug targets of the twenty-first century?" Nature Reviews: Drug Discovery. Vol. 1 pgs. 309-315 (2002).		
	13	Cohen, "The origins of protein phosphorylation," Nature Cell Biology. Vol. 4 pgs. E127-130 (2002).		
	14	Cohen, "The regulation of protein function by multisite phosphorylation — a 25 year update," Trends in Biochemical Sciences. Vol. 25 pgs. 596-601 (2000).		
	15	Coleman, "Structure and mechanism of alkaline phosphatase," Annual Review of Biophysics and Biomolecular Structure. Vol. 21 pgs. 441-483 (1992).		

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	16	Conrads et al., "Breakthroughs and Views: New Tools for Quantitative Phosphoproteome Analysis," Biochemical and Biophysical Research Communications. Vol. 290 pgs. 885-890 (2002).		
	17	Cooper et al., "Detection and Quantification of Phosphotyrosine in Proteins," Methods in Enzymology. Vol. 99 pgs. 387-402 (1983).		
	18	Ficarro et al., "Phosphoproteome analysis by mass spectrometry and its application to <i>Saccharomyces cerevisiae</i> ," Nature Biotechnology. Vol. 20 pgs. 301-305 (2002).		
	19	Fischer, "Cellular regulation by protein phosphorylation: a historical overview," Biofactors Vol. 6. No. 3 pgs. 367-374 (1997).		
	20	Flint et al., "Development of 'substrate-trapping' of mutants to identify physiological substrates of protein tyrosine phosphatases," PNAS. Vol. 94 pgs. 1680-1685 (1997).		
	21	Gaberc-Porekar, V., and Menart, V., "Perspectives of immobilized-metal affinity chromatography," Journal of Biochemical and Biophysical Methods. Vol. 49 pgs. 335-360 (2001).		
	22	Garton et al., "Identification of p130 ^{cas} as a Substrate for the Cytosolic Protein Tyrosine Phosphatase PTP-PEST," Molecular and Cellular Biology. Vol. 16, No. 11 pgs. 6408-6418 (1996).		
	23	Hancock et al., "The challenges of developing a sound proteomics strategy," Proteomics. Vol. 2 pgs. 352-359 (2002).		
	24	Hemdan et al., "Surface topography of histidine residues: a facile probe by immobilized metal ion affinity chromatography," PNAS. Vol. 86 pgs. 1811-1815 (1989).		
	25	Hochuli, "Large-scale chromatography of recombinant proteins," Journal of Chromatography. Vol. 444 pgs. 293-302 (1988).		

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	26	Hochuli et al., "New metal chelate adsorbent selective for proteins and peptides containing neighbouring histidine residues," Journal of Chromatography. Vol. 411 pgs. 177-184 (1987).	
	27	Holtz, K.M., and Kantrowitz, E.R., "The mechanism of the alkaline phosphatase reaction: Insights from NMR, crystallography and site-specific mutagenesis," FEBS Letters. Vol. 462 pgs. 7-11 (1999).	
	28	Howe, A.K., and Juliano, R.L., "Regulation of anchorage-dependent signal transduction by protein kinase A and p21-activated kinase," Nature Cell Biology. Vol. 2 pgs. 593-600 (2000).	
	29	Howe et al., "Integrin signaling and cell growth control," Current Opinion in Cell Biology. Vol. 10 pgs. 220-231 (1998).	
	30	Howe et al., "Regulation of Vasodilator-stimulated Phosphoprotein Phosphorylation and Interaction with Abl by Protein Kinase A and Cell Adhesion," The Journal of Biological Chemistry. Vol. 277, No. 41 pgs. 38121-38126 (2002).	
	31	Hunt et al., "Protein sequencing by tandem mass spectrometry," PNAS. Vol. 83 pgs. 6233-6237 (1986).	
	32	Hunter, "Protein Kinases and Phosphatases: The Yin and Yang of Protein Phosphorylation and Signaling. Cell. Vol. 80 pgs. 225-236 (1995).	
	33	Hunter, "Signaling — 2000 and beyond," Cell. Vol. 100 pgs. 113-127 (2000).	
	34	Hunter, "The Croonian Lecture 1997. The phosphorylation of proteins on tyrosine: its role in cell growth and disease," Philosophical Transactions of the Royal Society B: Biological Sciences. Vol. 353 pgs. 583-605 (1998).	
	35	Jackson, M.D., and Denu, J.M., "Molecular Reactions of Protein Phosphatases — Insights from Structure and Chemistry," Chemical Reviews. Vol. 101 pgs. 2313-2340 (2001).	

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Art Unit	1642
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	36	Jensen et al., "Peptide Sequencing of 2-DE Gel-Isolated Proteins by Nano-electrospray Tandem Mass Spectrometry," Methods in Molecular Biology. Vol. 112 pgs. 571-588 (1999).	
	37	Johnson, A.R., and Dekker, E.E., "Woodward's reagent K inactivation of <i>Escherichia coli</i> L-threonine dehydrogenase: Increased absorbance at 340-350 nm is due to modification of cysteine and histidine residues, not aspartate or glutamate carboxyl groups," Protein Science. Vol. 5 pgs. 382-390 (1996).	
	38	Johnson, L.N., and Lewis, R.J., "Structural Basis for Control by Phosphorylation," Chemical Reviews. Vol. 101, No. 8 pgs. 2209-2242 (2001).	
	39	Johnson et al., "Dynamics of cAMP-Dependent Protein Kinase," Chemical Reviews. Vol. 101, No. 8 pgs. 2243-2270 (2001).	
	40	Kawachi et al., "Identification of GIT1/Cat-1 as a substrate molecule of protein tyrosine phosphatase ζ/β by the yeast substrate-trapping system," PNAS. Vol. 98, No. 12 pgs. 6593-6598 (2001).	
	41	Kennelly, "Protein Phosphatases - A Phylogenetic Perspective," Chemical Reviews. Vol. 101, No. 8 pgs. 2291-2312 (2001).	
	42	Kim, E.E., and Wyckoff, H.W., "Reaction Mechanism of Alkaline Phosphatase Based on Crystal Structures. Two-metal Ion Catalysis," Journal of Molecular Biology. Vol. 218 pgs. 449-464 (1991).	
	43	Lau et al., "Tau Protein Phosphorylation as a Therapeutic Target in Alzheimer's Disease," Current Topics in Medicinal Chemistry. Vol. 2 pgs. 395-415 (2002).	
	44	Lee, J.T., Jr. and McCubrey, J.A., "The Raf/MEK/ERK signal transduction cascade as a target for chemotherapeutic intervention in leukemia," Leukemia Vol. 16 pgs. 486-507 (2002).	
	45	Li, S., and Dass, C., "Iron(III)-Immobilized Metal Ion Affinity Chromatography and Mass Spectrometry for the Purification and Characterization of Synthetic Phosphopeptides," Analytical Biochemistry. Vol. 270 pgs. 9-14 (1999).	

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	46	Li, W. and She, H., (2000) "The SH2 and SH3 adaptor Nck: a two-gene family and a linker between tyrosine kinases and multiple signaling networks," Histology and Histopathology. Vol. 15 pgs. 947-955 (2000) [ABSTRACT].	
	47	Lindner et al., "Purification of Native Proteins from the Cytoplasm and Periplasm of <i>Escherichia coli</i> Using IMAC and Histidine Tags: A Comparison of Proteins and Protocols," METHODS: A Companion to Methods in Enzymology. Vol. 4 pgs. 41-56 (1992).	
	48	Mann, M., and Pandey, A., "Use of mass spectrometry-derived data to annotate nucleotide and protein sequence databases," Trends in Biochemical Sciences. Vol. 26, No. 1 pgs. 54-61 (2001).	
	49	Mann et al., "Analysis of protein phosphorylation using mass spectrometry: deciphering the phosphoproteome." Trends in Biotechnology. Vol. 20, No. 6 pgs. 261-268 (2002).	
	50	McCarty, "The Nck SH2/SH3 adaptor protein: a regulator of multiple intracellular signal transduction events," BioEssays. Vol. 20 pgs. 913-921 (1998).	
	51	Muszyńska et al., "Model studies on iron(III) ion affinity chromatography. II. Interaction of immobilized iron(III) ions with phosphorylated amino acids, peptides and proteins," Journal of Chromatography. Vol. 604 pgs. 19-28 (1992).	
	52	Muszyńska et al., "Selective Adsorption of Phosphoproteins on Gel-Immobilized Ferric Chelate," Biochemistry. Vol. 25 pgs. 6850-6853 (1986).	
	53	Myers et al., "TYK2 and JAK2 Are Substrates of Protein-tyrosine Phosphatase 1B," The Journal of Biological Chemistry. Vol. 276, No. 51 pgs. 47771-47774 (2001).	
	54	Neel, B.G., and Tonks, N.K., "Protein tyrosine phosphatases in signal transduction," Current Opinion in Cell Biology. Vol. 9 pgs. 193-204 (1997).	
	55	Neubauer, G., and Mann, M., "Mapping of Phosphorylation Sites of Gel-Isolated Proteins by Nano-electrospray Tandem Mass Spectrometry: Potentials and Limitations," Analytical Chemistry. Vol. 71 pgs. 235-242 (1999).	

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	56	Oda et al., "Enrichment analysis of phosphorylated proteins as a tool for probing the phosphoproteome," Nature Biotechnology. Vol. 19 pgs. 379-382 (2001).	
	57	Official Action corresponding to U.S. Patent Application Serial No. 11/901,875 dated October 21, 2009.	
	58	Official Action corresponding to U.S. Patent Application Serial No. 11/901,875 dated June 21, 2010.	
	59	Pandey et al., "Use of Mass Spectrometry to Study Signaling Pathways," Science's STKE. Vol. 2000, No. 37 pgs. 1-12 (2000).	
	60	Paoli et al., "Mechanism of acylphosphatase inactivation by Woodward's reagent K," Biochemical Journal. Vol. 328 pgs. 855-861 (1997).	
	61	Patton, "Proteome analysis. II. Protein subcellular redistribution: linking physiology to genomics via the proteome and separation technologies involved," Journal of Chromatography B. Vol. 722 pgs. 203-223 (1999).	
	62	Porath, "High-performance immobilized-metal-ion affinity chromatography of peptides and proteins," Journal of Chromatography. Vol. 443 pgs. 3-11 (1988).	
	63	Porath, "Immobilized Metal Ion Affinity Chromatography," Protein Expression and Purification. Vol. 3 pgs. 263-281 (1992).	
	64	Porath, J., and Olin, B., "Immobilized Metal Ion Affinity Adsorption and Immobilized Metal Ion Affinity Chromatography of Biomaterials. Serum Protein Affinities for Gel-Immobilized Iron and Nickel Ions," Biochemistry. Vol. 22 pgs. 1621-1630 (1983).	
	65	Porath et al., "Metal chelate affinity chromatography, a new approach to protein fractionation," Nature. Vol. 258 pgs. 598-599 (1975).	

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	66	Puri, R.N., and Colman, R.W., "A Novel Method for Chemical Modification of Functional Groups Other Than a Carboxyl Group in Proteins by N-Ethyl-5-phenylisoxazolium-3'-sulfonate (Woodward's Reagent-K): Inhibition of ADP-induced Platelet Responses Involves Covalent Modification of Aggregin, an ADP Receptor," <i>Analytical Biochemistry</i> . Vol. 240 pgs. 251-261 (1996).	
	67	Ramadan, N., and Porath, J., "Fe ³⁺ -Hydroxamate as Immobilized Metal Affinity-Adsorbent for Protein Chromatography," <i>Journal of Chromatography</i> . Vol. 321 pgs. 93-104 (1985).	
	68	Raska et al., "Direct MALDI-MS/MS of Phosphopeptides Affinity-Bound to Immobilized Metal Ion Affinity Chromatography Beads," <i>Analytical Chemistry</i> . Vol. 74 pgs. 3429-3433 (2002).	
	69	Reinhard et al., "Actin-based motility: stop and go with Ena/VASP proteins," <i>Trends in Biochemical Sciences</i> . Vol. 26, No. 4 pgs. 243-249 (2001).	
	70	Sawyers, "Disabling Abl—Perspectives on Abl kinase regulation and cancer therapeutics," <i>Cancer Cell</i> . Vol. 1 pgs. 13-15 (2002).	
	71	Sefton, "Measurement of Stoichiometry of Protein Phosphorylation by Biosynthetic Labeling," <i>Methods in Enzymology</i> . Vol. 201 pgs. 245-251 (1991).	
	72	Shabb, "Physiological Substrates of cAMP-Dependent Protein Kinase," <i>Chemical Reviews</i> . Vol. 101, No. 8 pgs. 2381-2411 (2001).	
	73	Sinha, U., and Brewer, J.M., "A Spectrophotometric Method for Quantitation of Carboxyl Group Modification of Proteins Using Woodward's Reagent K," <i>Analytical Biochemistry</i> . Vol. 151 pgs. 327-333 (1985).	
	74	Smith et al., "The catalytic subunit of cAMP-dependent protein kinase: prototype for an extended network of communication," <i>Progress in Biophysics & Molecular Biology</i> . Vol. 71 pgs. 313-341 (1999).	
	75	Smolenski et al., "Analysis and Regulation of Vasodilator-stimulated Phosphoprotein Serine 239 Phosphorylation <i>in Vitro</i> and in Intact Cells Using a Phosphospecific Monoclonal Antibody," <i>The Journal of Biological Chemistry</i> . Vol. 273, No. 32 pgs. 20029-20035 (1998).	

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Substitute for form 1449B/PTO			Complete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT			Application Number	10/719,990
			Filing Date	November 21, 2003
			First Named Inventor	Alan Howe
			Art Unit	1642
			Examiner Name	Brandon J. Fetterolf
(Use as many sheets as necessary)			Attorney Docket Number	421/73/2
Sheet	9	of	10	

NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
	76	Srivastava, "High glucose-induced activation of protein kinase signaling pathways in vascular smooth muscle cells: a potential role in the pathogenesis of vascular dysfunction in diabetes (review)," Int. J. Mol. Med. Vol. 9 pgs. 85-89 (2002).	
	77	Stec et al., "A Revised Mechanism for the Alkaline Phosphatase Reaction Involving Three Metal Ions," Journal of Molecular Biology. Vol. 299 pgs. 1303-1311 (2000).	
	78	Stec et al., "Kinetic and X-ray Structural Studies of Three Mutant <i>E. coli</i> Alkaline Phosphatases: Insights into the Catalytic Mechanism Without the Nucleophile Ser102," Journal of Molecular Biology. Vol. 277 pgs. 647-662 (1998).	
	79	Steen et al., "Quadrupole time-of-flight versus triple-quadrupole mass spectrometry for the determination of phosphopeptides by precursor ion scanning," Journal of Mass Spectrometry. Vol. 36 pgs. 782-790 (2001).	
	80	Stensballe et al., "Characterization of phosphoproteins from electrophoretic gels by nanoscale Fe(III) affinity chromatography with off-line mass spectrometry analysis," Proteomics. Vol. 1 pgs. 207-222 (2001).	
	81	Sulkowski, "The Saga of IMAC and MIT," Bioessays. Vol. 10, No. 5 pgs. 170-175 (1989).	
	82	Tamura et al., "PTEN interactions with Focal Adhesion Kinase and Suppression of the Extracellular Matrix-dependent Phosphatidylinositol 3-Kinase/Akt Cell Survival Pathway," The Journal of Biological Chemistry. Vol. 274, No. 29 pgs. 20693-20703 (1999).	
	83	Ukkola, O., and Santaniemi, M., "Protein tyrosine phosphatase 1B: a new target for the treatment of obesity and associated co-morbidities," Journal of Internal Medicine. Vol. 251 pgs. 467-475 (2002).	
	84	Verri et al., "Molecular characteristics of small intestinal and renal brush border thiamin transporters in rats," Biochimica et Biophysica Acta. Vol. 1558 pgs. 187-197 (2002).	
	85	Yang et al., "Localization of a carboxylic residue possibly involved in the inhibition of vacuolar H ⁺ -pyrophosphatase by N, N'-dicyclohexylcarbodi-imide," Biochemical Journal. Vol. 342 pgs. 641-646 (1999).	

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